

REMARKS

Applicants respectfully request reconsideration of the present U.S. Patent application.
Claims 1-24 are pending.

Claim Rejections - 35 U.S.C. § 103

Claims 1-5, 10-13, 15-21, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,959,989A issued to Gleeson et al. in view of Biedron, W.S., ("Metropolitan Area Network Services Comprised of Virtual Local Area Networks Running over Hybrid-Fiber/Coax and Asynchronous Transfer Mode Technologies", Proceedings of SPIE, Vol. 2609, Oct. 23, 1995, pp 50-57, XP002049372).

As is clearly set forth at Section 706.02(j) of the M.P.E.P., the following three basic criteria must be met in order for the Examiner to establish a prima facie case of obviousness:

1. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. There must be a reasonable expectation that combining the references would successfully result in the claimed invention; and
3. **The prior art references when combined must teach or suggest all limitations of the claims under examination.**

Claim 1 recites the following:

a metropolitan area network (MAN);
a first VLAN and a second VLAN, wherein the second VLAN comprises the first VLAN;
and
a switch coupled to the MAN and the first and second VLANs to receive from the first VLAN a data packet having a first VLAN ID associated with the first VLAN, to replace the first VLAN ID with a second VLAN ID associated with the second VLAN, wherein the second VLAN ID is different from the first VLAN ID, and to forward the modified data packet from the first VLAN to the MAN.

Gleeson discloses a system for multicast distribution in a VLAN environment that includes a multicast network device configured to generate a multicast VLAN ID for each unique combination of VLANs to which any multicast group address is to be directed. The multicast VLAN ID, along with its corresponding VLAN designations, is propagated to intermediate devices of the network and attached to subsequent multicast messages to enable efficient distribution of those messages over the network. (See col. 5, lines 55 to 67).

Gleeson does not disclose, teach, or suggest a system comprising a first VLAN and a second VLAN, where the second VLAN comprises the first VLAN. Gleeson does not disclose, teach, or suggest a switch coupled to a MAN and the first and second VLANs to replace in a data packet the first VLAN ID associated with the first VLAN with a second VLAN ID associated with the second VLAN and to forward the modified data packet to the MAN. These limitations are recited in claim 1. Therefore, claim 1 is patentable over Gleeson.

Biedron teaches a hybrid fiber-coax system. The Office Action states that Biedron teaches of a Metropolitan Area Network (MAN). Whether or not Biedron teaches of a MAN, Biedron does not disclose, teach, or suggest a first VLAN and a second VLAN, where the second VLAN comprises the first VLAN. Furthermore, Biedron does not disclose, teach, or suggest a switch coupled to a MAN and the first and second VLANs to replace in a data packet the first VLAN ID associated with the first VLAN with a second VLAN ID associated with the second

VLAN and to forward the modified data packet to the MAN. Therefore, Biedron does not cure the deficiencies of Gleeson.

Neither Gleeson nor Biedron discloses, teaches, or suggests a system comprising a first VLAN, a second VLAN that comprises the first VLAN, and a switch coupled to a MAN and the first and second VLANs to replace in a data packet the first VLAN ID associated with the first VLAN with a second VLAN ID associated with the second VLAN and to forward the modified data packet to the MAN. These limitations are recited in claim 1. Therefore, claim 1 is patentable over Gleeson and Biedron.

Claims 2-11 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicant submits that claims 2-11 are patentable over Gleeson and Biedron for at least the reasons set forth above.

Claim 12 recites the following:

receiving at a switch coupled to a MAN, a first VLAN, and a second VLAN, a data packet from the first VLAN, the data packet having a first VLAN ID associated with the first VLAN; replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, wherein the first VLAN ID is different from the second VLAN ID; and forwarding the modified data packet from the first VLAN to the MAN.

Claim 18 similarly recites receiving at a switch coupled to a MAN, a first VLAN, and a second VLAN, a data packet having a first VLAN ID associated with the first VLAN, replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, and forwarding the modified data packet from the first VLAN to the MAN.

As discussed above, Gleeson discloses a system for multicast distribution in a VLAN environment that includes a multicast network device configured to generate a multicast VLAN ID for each unique combination of VLANs to which any multicast group address is to be

directed. Gleeson does not disclose, teach, or suggest receiving at a switch coupled to a MAN, a first VLAN, and a second VLAN, a data packet having a first VLAN ID associated with the first VLAN. Gleeson does not disclose, teach, or suggest replacing the first VLAN ID with a second VLAN ID associated with the second VLAN and forwarding the modified data packet from the first VLAN to the MAN. These elements are recited in claims 12 and 18. Therefore, claims 12 and 18 are patentable over Gleeson.

Biedron teaches a hybrid fiber-coax system. The Office Action states that Biedron teaches of a MAN. Whether or not Biedron teaches of a MAN, Biedron does not disclose, teach, or suggest receiving at a switch coupled to a MAN, a first VLAN, and a second VLAN, a data packet having a first VLAN ID associated with the first VLAN, replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, and forwarding the modified data packet from the first VLAN to the MAN. Therefore, Biedron does not cure the deficiencies of Gleeson.

Neither Gleeson nor Biedron discloses, teaches, or suggests receiving at a switch coupled to a MAN, a first VLAN, and a second VLAN, a data packet having a first VLAN ID associated with the first VLAN, replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, and forwarding the modified data packet from the first VLAN to the MAN. These limitations are recited in claims 12 and 18. Therefore, claims 12 and 18 are patentable over Gleeson and Biedron.

Claims 13-17 and 19 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicant submits that claims 13-17 and 19 are patentable over Gleeson and Biedron for at least the reasons set forth above.

Claim 20 recites the following:

a port for receiving a data packet from a first VLAN;

an assigner to assign a first VLAN ID to the data packet that identifies the first VLAN;
a verifier to verify that the assigned first VLAN ID matches a value stored in a memory of the switch;

a controller to control the processing of the verified data packet and to replace the verified first VLAN ID with a second VLAN ID that identifies a second VLAN; and
a forwarder to forward the modified data packet to the MAN.

As discussed above, Gleeson discloses a system for multicast distribution in a VLAN environment that includes a multicast network device configured to generate a multicast VLAN ID for each unique combination of VLANs to which any multicast group address is to be directed. Gleeson does not disclose, teach, or suggest a controller to replace the verified first VLAN ID associated with the first VLAN with a second VLAN ID that identifies a second VLAN, and a forwarder to forward the modified data packet to the MAN. These limitations are recited in claim 20. Therefore, claim 20 is patentable over Gleeson.

Biedron teaches a hybrid fiber-coax system. The Office Action states that Biedron teaches of a MAN. Whether or not Biedron teaches of a MAN, Biedron does not disclose, teach, or suggest a controller to replace the verified first VLAN ID associated with the first VLAN with a second VLAN ID that identifies a second VLAN, and a forwarder to forward the modified data packet to the MAN. Therefore, Biedron does not cure the deficiencies of Gleeson.

Neither Gleeson nor Biedron discloses, teaches, or suggests a controller to replace the verified first VLAN ID associated with the first VLAN with a second VLAN ID that identifies a second VLAN, and a forwarder to forward the modified data packet to the MAN. These limitations are recited in claim 20. Therefore, claim 20 is patentable over Gleeson and Biedron.

Claims 21-24 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicant submits that claims 21-24 are patentable over Gleeson for at least the reasons set forth above.

Claims 6-9, 14 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gleeson et al., in view of Biedron, and further in view of U.S. Patent No. 6,181,699B1 issued to Crinion et al.

As discussed above, neither Gleeson nor Biedron discloses, teaches, or suggest the limitations recited in claims 1, 12, 18, and 20. Crinion discloses an apparatus and method for assigning VLAN tags based on data frame information and the port on which the data frame is received. (See col. 1, lines 45-47). The Office Action states that Crinion teaches the first and second VLAN ID obtained from a header encapsulating the data packet, and the header is an IEEE 802.1Q frame tag. Whether or not Crinion teaches these features, Crinion does not disclose, teach, or suggest a first VLAN, a second VLAN, that comprises the first VLAN, and a switch coupled to a MAN and the first and second VLANs to replace in a data packet the first VLAN ID associated with the first VLAN with a second VLAN ID associated with the second VLAN and to forward the modified data packet to the MAN. These limitations are recited in claim 1.

Crinion does not disclose, teach, or suggest receiving at a switch coupled to a MAN, a first VLAN, and a second VLAN, a data packet having a first VLAN ID associated with the first VLAN, replacing the first VLAN ID with a second VLAN ID associated with the second VLAN, and forwarding the modified data packet from the first VLAN to the MAN. These limitations are recited in claims 12 and 18.

Crinion does not disclose, teach, or suggest a controller to replace the verified first VLAN ID associated with the first VLAN with a second VLAN ID that identifies a second VLAN, and a forwarder to forward the modified data packet to the MAN. These limitations are recited in claim 20. Therefore, Crinion does not cure the deficiencies of Gleeson and Biedron. Neither Gleeson, Biedron, nor Crinion teaches the limitations recited in claims 1, 12, 18, and 20.

Therefore, Applicant submits that claims 1, 12, 18, and 20 are patentable over Gleeson, Biedron, and Crinion.

Claims 2-11, 13-17, 19, 21-24 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicant submits that claims 2-11, 13-17, 19, 21-24 are patentable over Gleeson, Biedron, and Crinion for at least the reasons set forth above.

Conclusion

In view of the amendments and remarks set forth above, Applicants submit that claims 1-24 are in condition for allowance and such action is respectfully solicited. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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Date: 9/23/03

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